

## Abstract

The object of the present invention is to measure the silanol group concentration in silicon compound, rapidly and at a high accuracy by infrared spectrophotometry. A silicon compound, when comes in contact with, for example, water in the air, reacts therewith immediately, forming a silanol group. Therefore, in measurement of the silanol group concentration in silicon compound, it is necessary that the sample to be measured is not contacted with the air and that the very small amount of water adhering to the inside of a sample cell is removed completely.

In the present invention, the removal of water inside the cell in a short time has been made possible by use of a pressure-resistant cell.

The first aspect of the present invention lies in:  
a method for measurement of silanol group concentration in silicon compound by infrared spectrophotometry, which comprises:

conducting, prior to filling of a silicon compound in a cell, at least twice each of a step of keeping the cell inside at 20 Pa or lower and a step of keeping the cell inside at 0.2 to 1 MPa,

then, introducing the silicon compound into the cell and measuring the infrared absorption spectrum thereof, to measure the concentration of the silanol group in the silicon compound.

The second aspect of the present invention lies in:

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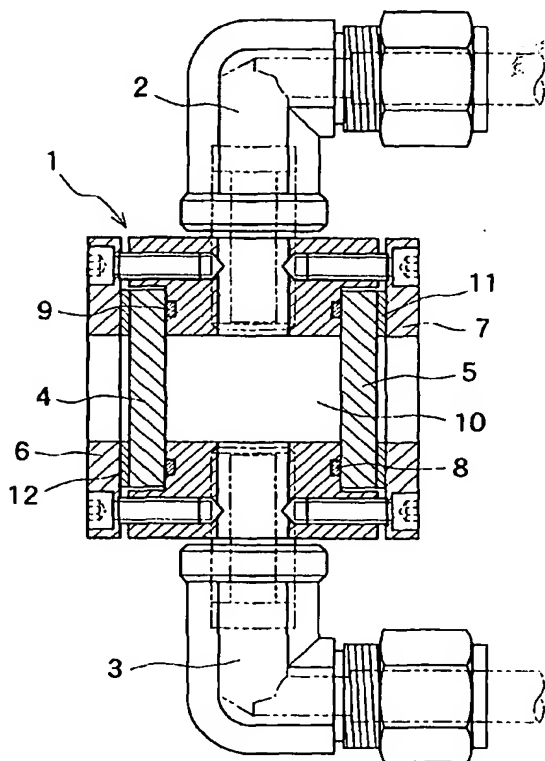
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(54) Title: METHOD OF MEASURING CONCENTRATION OF SILANOL GROUP AND CELL FOR MEASUREMENT

(54) 発明の名称: シラノール基濃度の測定方法および測定用セル



(57) **Abstract:** The removal of intra-cell moisture can be performed within a short period of time by the use of pressure cell. In particular, a method of measuring the concentration of silanol groups characterized in that in the measurement of the concentration of silanol groups in a silicon compound according to infrared absorption spectroscopy, a step of maintaining an intra-cell pressure at 20 Pa or below and a step of maintaining the same at 0.2 to 1 MPa are repeated at least twice before charging the cell with a silicon compound, thereafter a silicon compound is introduced in the cell and cell for measurement and infrared absorption spectroscopy measurement thereof is carried out to thereby identify the concentration of silanol groups in the silicon compound. For this method, there is provided a cell for infrared absorption spectroscopy measurement which can withstand a vacuum of 20 Pa or below and also can withstand a pressurization of 0.2 to 1 MPa.

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